Chapter 4 Cumulative Impacts

Both NEPA (*40 CFR 1508.7*) and CEQA [*Guidelines Section 15130(a)]* require a discussion of cumulative impacts when a project's incremental effects are cumulatively considerable when taken together with those of closely related past, present and reasonably foreseeable projects. Cumulative effects analyses are typically difficult to thoroughly assess due to a lack of definitive information on future development projects. This analysis uses the best available information to assess the potential for cumulative effects from the proposed project.

4.1 Cumulative Effects Area

For the proposed project, the area for evaluation of cumulative effects (as requested by resource agencies during NEPA/404 coordination) is the SR 70/149/99 corridor between Sacramento and Chico (Figure 4-1). This area lies entirely on the eastern valley floor of the Sacramento Valley within the Feather River watershed. This area was selected because it would be most influenced by the highway upgrades in the corridor. As discussed earlier, Routes 70 and 99 were studied in the 1986 Route Concept Report, 1990 Regional Transportation Plan (SACOG), and State Routes 70 and 99 Corridor Study (BCAG, SACOG). The conclusion of these studies identified SR 70 as the primary transportation corridor linking Sacramento and Chico, and the preferred route for transportation upgrades.

4.2 Projects Considered in Cumulative Effects Evaluation

The following projects, described in Table 4-1, have been included in the cumulative effects evaluation, as they are located along the SR 70 corridor or in the general vicinity of the proposed SR 70/149/99/191 project in Butte County:

- SR 70/149/99/191 Highway Upgrade (proposed project)
- But-70 Freeway Extension and Ophir Road Interchange
- Yuba/But 70 Marysville to Oroville Freeway (Marysville Bypass)
- Sutter/Yuba 70 Highway Upgrade
- Algodon Road/SR 70 Interchange
- But-99 Roadway Rehabilitation

Figure 4-1. Routes 70/149 Highway Projects

Table 4-1. Cumulative Effects Corridor Projects

Projects Considered	Major Project/Planning Components	Major Biological Resources/Issues	Mitigation/Conservation Elements
Caltrans/FHWA Projects			
Route 149 Expressway Upgrade	Expressway upgrade on existing Route 149; presently three proposed alternatives linking Route 70 and 99	VELB, special-status shrimp habitat, *Limnanthes*, wetland habitat impacts	LEDPA, mitigation on-site and at approved mitigation bank
Route 70 Expressway Upgrade	Expressway upgrade on existing Route 70 from 70/99 split to McGowan in Olivehurst (includes Nicolaus Bypass)	GGS habitat, VELB, special-status shrimp habitat, anadromous fisheries, wetland impacts	LEDPA, mitigation at approved State and private mitigation banks
Marysville Bypass	Completely new Route 70 freeway adoption with controlled access interchanges at 99 and 70; presently three proposed alternatives from 70/65 split north to Oroville	VELB, special-status shrimp habitat, *Orcuttia*, new Yuba River and Honcut Creek crossings, wetland impacts, District 10 waterfowl/raptor habitat impacts	LEDPA, impacts and mitigation to be determined
Route 70 Freeway Extension/ Ophir Rd Interchange	Extend Route 70 freeway to new interchange at Ophir Rd.	Wetland and pond impacts, VELB	Mitigation on-site and at approved mitigation bank
Algodon Road /SR 70 Interchange	Interchange in association with Plumas Lake Specific Plan and possible Motorplex	Wetlands, GGS habitat, special-status shrimp habitat, Swainson's hawk habitat	Mitigation on-site for GGS habitat; other mitigation at approved mitigation banks
But-99 Rehabilitation	Rehabilitate roadway, construct shoulders	VELB, special-status shrimp habitat, anadromous fisheries, wetlands	Mitigation at approved State and private mitigation banks
Local Planning Documents			
Sutter County			
Yuba City Urban Plan	Development mostly confined to the immediate vicinity of Yuba City which is largely orchards	Very little to no natural habitat in the Yuba City vicinity	Preservation of Feather River
Yuba County			
Yuba County General Plan	Commercial and industrial development along Route 65 corridor	Wetlands associated with Reed's, Hutchinson, and Kimball creeks, vernal pool parcel south of Erle Road	Preservation of Reed's, Hutchinson, and Kimball creeks (State flood control easements)
North Arboga Study Area	Residential and commercial development south of Olivehurst and adjacent to the Plumas Lake Specific Plan	Special-status shrimp habitat (limited), wetland impacts, limited GGS habitat	No net loss of wetlands, protection of sensitive biological areas, development setbacks from drainages and water courses

Plumas Lake Specific Plan	Residential and commercial development extending south of the North Arboga Study Area along Route 70 corridor	Special-status shrimp habitat, GGS habitat, wetland impacts	Preservation of riparian areas, development setbacks from drainages and riparian corridors, consultation with USFWS/CDFG on any listed species
East Linda Specific Plan	Residential and commercial development extending east of Linda	Some seasonal wetlands and drainages—minimal habitat for sensitive species	Wetland resources protection
Yuba County Motorplex and Amphitheater	Racetrack, amphitheater, and business park development south of Linda/Olivehurst	seasonal wetlands and marsh habitat	Preservation of Kimball Creek (largest wetland areas); on-site wetland mitigation within Kimball Creek area
City of Marysville General Plan	City built-out, growth in vacant or redevelopment areas	Feather River and Yuba River	Preservation of Feather and Yuba River, Marysville Wildlife Area
North Marysville Specific Plan	North extension of Marysville for residential and commercial development. Presently not approved. Flood control a constraining element	District 10 winter waterfowl habitat, seasonal marsh impacts	Preservation of Jack and Simmerly Sloughs (largest wetland/riparian areas)
Spring Valley Specific Plan	Residential community northeast of Marysville and District 10 waterfowl area on Route 20	Wetland impacts including possible isolated vernal pools and seasonal marsh habitats	Preservation of wetlands through open space areas and conservation easements
<u>Butte County</u>			
City of Oroville General Plan	Planned growth (residential, commercial, industrial) confined within the Oroville General Plan area	VELB, vernal pools and associated sensitive species, extensive riparian areas, Feather River (anadromous fisheries)	Several conservation areas designated in the General Plan, including vernal pool and riparian areas, Lake Oroville, Feather River and Wyandotte Creek corridor, and Oroville Wildlife Area
City of Chico General Plan	Planned growth (residential, commercial, industrial) confined within the Chico General Plan area	VELB, vernal pools and associated sensitive species, Big Chico and Butte creeks (anadromous fisheries)	Perpetual conservation areas along Big Chico, Butte, and Sycamore creeks
Butte County General Plan		VELB, vernal pools and associated sensitive species, wetlands, BCM,	Preservation of open space

VELB = valley elderberry longhorn beetle; GGS = giant garter snake; BCM = Butte County Meadowfoam; LEDPA = least environmentally damaging practicable alternative in coordination with the resource and regulatory agencies

Other non-federal projects that would most likely occur in the action area include primarily residential and commercial development. These actions are largely based on build-out and growth patterns consistent with approved land-use plans. Land use planning documents used in this analysis include Sutter County, Yuba County, Butte County, City of Marysville, City of Oroville, City of Chico, and Yuba City Urban Area general plans (*Caltrans 2000*). Figure 4-2 shows the location of these local planning areas of planned growth.

4.3 Cumulative Effects

Caltrans/FHWA transportation projects would largely be confined to the existing highway corridors, with the exception of some of the Marysville Bypass alternatives. Most of the transportation projects would essentially upgrade highway capacity on existing corridors in the region in response to anticipated growth, safety concerns, and level of service.

Based on local planning documents, anticipated growth within the cumulative effects area is expected to continue to be concentrated, for the most part, around existing developed communities, including Yuba City, Olivehurst, Linda, Marysville, Oroville, and Chico. Generally, agricultural lands are the dominant land use in the cumulative effects area and preservation of these lands, as well as remnant natural habitat areas, is a primary planning goal as emphasized by city and county planning policies. It appears that, for the foreseeable future, agricultural uses would continue as the primary land use outside the areas identified for planned growth. The proposed project is not expected to induce growth in the area.

4.3.1 Biological Resources

Biological resources considered in the cumulative effects analysis include habitats supporting special-status species and other sensitive resources (i.e., wetlands). Federal-listed species considered in this evaluation include valley elderberry longhorn beetle (VELB), listed shrimp species, and Butte County Meadowfoam (BCM). The cumulative effects to other federally listed species (e.g., Giant Garter Snake) not directly affected by the SR 70/149/99/191 upgrade but potentially occurring in other areas that may be affected by other Caltrans/FHWA projects would be addressed in documents for those projects.

Figure 4-2. Areas of Planned Growth

Vernal Pools

Vernal pools are the most sensitive resource in the cumulative effects area because they provide habitat for most of the listed species in the area. Vernal pools were mapped based on aerial photos covering the region, field reconnaissance and surveys, and the CNDDB (1999).

The distribution of vernal pools is largely concentrated in the northern part of the cumulative effects area in Butte County, with more fragmented and isolated pools in the southern part of the area. Because of the wide distribution of vernal pools, it is difficult to totally avoid these resources by future planned freeways and developments, and it would be anticipated that additional losses would occur. Several specific and general plans including East Linda Specific Plan, North Marysville Specific Plan, Yuba City Urban Area, City of Marysville, and North Arboga Study Area do not have or have very little vernal pool habitat. Specific and general plans that have vernal pool habitat include Oroville and Chico general plans, Yuba County General Plan (Route 65 corridor development area), and the Spring Valley and Plumas Lake Specific Plans.

Within the cumulative effects area, approximately 8000 ha (19,760 ac) have been delineated as vernal pool habitat (*Caltrans 2000*). Conservatively estimating about an 8% density of actual vernal pool habitat in these areas, although several vernal pool complexes appear to have much higher densities (>15%), this would equate to about 640 ha (1,580 ac) of vernal pool habitat.

All of the projects considered in this cumulative impact discussion would have vernal pool impacts. The following table presents estimated impacts to vernal pools (permanent + temporary) from these five transportation projects:

Table 4-2. Vernal Pool and Swale Impacts

Project	Estimated Impact ha (ac) (perm. + temp.)	% of Total Cumulative Area Habitat
But-70/149/99/191 Upgrade	2.63 (6.5)	0.4
Ophir Road Interchange	1.8 (4.5)	0.3
But-99 Rehabilitation	0.68 (1.68)	0.1
Marysville Bypass	1.83 – 6.72 (4.52 – 16.61) depending on alternative selected	0.29 – 1.05 depending on alternative selected
Route 70 Expressway Upgrade	1.99 (4.92)	0.3
Algodon Rd. Interchange	0.13	0.02

Vernal Pool Fairy and Tadpole Shrimp

The proposed project would result in direct impacts to fairy shrimp/tadpole shrimp habitat of 29.33 ac. These would be mitigated through a combination of preservation (2:1 ratio) and creation (1:1 ratio) of habitat in consultation with USFWS. Indirect impacts are estimated to be 17.0 ac. Preservation of habitat at a 2:1 ratio is proposed for these impacts. These mitigation measures would minimize the cumulative effects to fairy shrimp and tadpole shrimp.

Impacts to vernal pool shrimp species resulting from the other projects listed in Table 4-2 would be mitigated on a project-by-project basis. This "cumulative mitigation" would serve to offset cumulative impacts to these species.

Butte County Meadowfoam

For the proposed project, Alternative 3 would avoid direct impacts to BCM. Mitigation for indirect impacts to 0.53 ac of habitat would minimize cumulative impacts. If BCM would be impacted by any of the other Butte County projects listed in Table 4-2, minimization and mitigation measures would also contribute to offset cumulative impacts.

Though there would be cumulative effects to vernal pool resources in the cumulative effects area, several areas do provide protection to these resources. In both the Oroville and Chico general plans, several areas where vernal pools occur are identified as open space and conservation elements in the plans identify avoidance measure to vernal pool habitats. Conservation easements in the District 10 area of Butte County include wetland and vernal pool resources that would be protected from development. The bulk of vernal pool resources, particularly in Butte County, occur outside planned growth areas, in areas largely zoned as agriculture. Current county policy is limiting growth to existing communities and would likely remain so in the foreseeable future. Areas that are zoned agriculture do not necessarily afford complete protection of these sensitive resources; however, this zoning designation does provide some protection to these resources from other incompatible uses such as development. Mitigation for impacts to vernal pool species and the associated wetland mitigation requirement for "no net loss" would minimize cumulative impacts. In addition, Butte County is currently in the process of establishing a Habitat Conservation Plan (HCP) that would regulate impacts on habitats within the County.

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle is essentially associated with elderberry shrubs found in riparian areas along rivers and creeks throughout the Central Valley and includes all of the cumulative effects area. Besides the proposed SR 70/149/99/191 highway upgrade, other projects that would potentially impact habitat for this species include the But-99 Rehabilitation, Marysville Bypass, Ophir Road Interchange, and Route 70 Expressway Upgrade.

Large rivers and creeks, particularly Feather River, Yuba River, Bear River, Honcut Creek, Jack Slough, Butte Creek, and Big Chico Creek support a high percentage of the riparian habitat in the cumulative effects area. These areas are prone to flooding, and have either been identified as open space and conservation areas by the local general and specific plans or are protected by CDFG (i.e., wildlife areas). Protection of these areas that likely support elderberry shrubs for VELB would help conserve this species in the cumulative effects area. In addition, property within the Bear River levees is likely to be acquired by CDFG (*Whitmore 2000*), which would further protect the existing elderberries.

The following table shows anticipated VELB impacts from projects in the cumulative effects area:

Table 4-3. VELB Impacts

Project	No. Shrubs	No. Stems >1"
SR 70/149/99/191 Upgrade	22	43 - 59
Ophir Rd. Interchange	7	26
But-99 Rehabilitation	3	15
Marysville Bypass	To be determined	To be determined
Route 70 Expressway Upgrade	22	27

The proposed SR 70/149/99/191 highway upgrade would impact approximately 22 elderberry shrubs. Avoidance and mitigation measures are proposed to reduce impacts from this and the other corridor projects to less than a significant level (CEQA). With these measures in place, the direct and cumulative impact to this species as the result of the proposed SR 70/149/99/191 is expected to be minimal.

Central Valley Chinook salmon and Steelhead

Central Valley Chinook salmon (spring-run and fall/late fall-run) and Central Valley steelhead occur throughout the cumulative effects area. These species primarily use the Feather River and several tributaries including Bear River and Coon Creek in the Route 70 Expressway Upgrade project area. Other Feather River tributaries that support these species in the cumulative effects area include Yuba River and Honcut Creek. In Butte County, in the northern portion of the cumulative effects area, tributaries that drain into the Sacramento River and are known to support these species include, Rock Creek, Dry Creek, Butte Creek and possibly Big Chico Creek.

Most of the areas planned for growth in the cumulative effects area do not encroach on major anadromous fish streams. In areas where anadromous rivers and creeks occur in local specific and general planning areas in the cumulative effects area, these resources have been identified as sensitive and the areas are designated as non-development areas, open space or conservation areas. Specifically, large stream reaches that are protected include conservation easements along Honcut Creek, Oroville Wildlife Area along Feather River (Oroville General Plan), and perpetual conservation easements along Big Chico and Butte creeks (Chico General Plan Area).

Cumulative effects to drainages that support these species in the cumulative effects area are expected to be relatively small, as the transportation projects are mostly linear. These types of projects typically do not permanently obstruct or divert natural streamflows and require specific procedures and timing restrictions during construction at stream crossings.

Swainson's Hawk

The proposed project has the potential to impact Swainson's hawk nesting and foraging habitat. Pre-construction surveys would identify potential nesting sites. Mitigation measures require protection or creation of equally suitable habitat within a 10-mile radius of impacted habitat. If required, this mitigation would reduce the potential for cumulative impacts to this species.

In addition, Caltrans is acquiring approximately 80 ha (200 ac) along the Bear River in Yuba County for Swainson's hawk foraging habitat mitigation for the SR 70 Expressway Upgrade project. This also contributes to the cumulative mitigation for this species.

4.3.2 Other Resources

The proposed SR 70/149/99/191 is not expected to contribute to cumulative effects to water quality, farmland, air quality or visual resources. Construction and minimization measures would reduce impacts in these areas to a less than significant level (CEQA).

4.3.3 Cumulative Effects Summary

Although regional growth would be concentrated in established community centers and transportation upgrades on existing State facilities, there still could be cumulative losses to sensitive biological resources. The SR 70/149/99/191 Upgrade project would contribute to these losses of vernal pools and wetlands that support federally listed species (including vernal pool invertebrates and Butte County Meadowfoam), and valley elderberry longhorn beetle. These losses would not be substantial with implementation of proposed project mitigation, and considering the extensive resources available in the cumulative effects area. Despite the likelihood of cumulative effects to these resources in the region, the cumulative individual mitigation and conservation measures identified in planning documents and required on Caltrans/FHWA transportation projects by resource agencies, as well as the forthcoming Butte County HCP would contribute to offset these effects.

In the cumulative effects area, agriculture is the predominant land use and has been identified as a high priority for preservation in local policies. In the foreseeable future, this land use would remain dominant even with full build out of all the planned growth areas identified in the cumulative effects. Much of the extensive agricultural area occurs outside the areas of planned development in areas where extensive vernal pool, rice fields, and other wetland resources provide essential habitat for sensitive species in the region. Although agriculture is not the best land use to protect sensitive species, these areas do curtail other incompatible uses such as development. Other elements that would limit growth in the region and provide habitat for many sensitive and common species include: State flood easements (Yuba County), habitat conservation easements (Yuba and Butte counties, District 10/Honcut Creek area), designated wildlife areas (Table Mountain, Oroville, Marysville), major floodplains (Feather River, Yuba River, Bear River), District 10 winter waterfowl area (Yuba County), and perpetual conservation areas (City of Chico). Because many of these areas limit incompatible land uses such as development, these areas would likely remain in their present condition.

Although there would be direct, indirect, and cumulative effects from the SR 70/149/99/191 Highway Upgrade, this project would not likely jeopardize the continued existence of listed shrimp species, Butte County Meadowfoam, valley elderberry longhorn beetle, and listed anadromous fish. This is based on measures to avoid, minimize and mitigate impacts to biological resources in the project area, land use constraints in the region, and extensive resources outside areas of foreseeable growth in the cumulative effects area. Additional discussion on this topic may be found in the following sections of Appendix B, Comments Received on Draft EIS/EIR: Responses to EPA, #15; Responses to DFG, #s 15 and 16; Responses to Butte Environmental Council, #11.

Chapter 5 Summary of Public Involvement Process/Tribal Coordination

5.1 Public Involvement

A Draft Initial Study/Environmental Assessment (Draft IS/EA) was circulated to the public May 15 to June 15, 2001. A public workshop was held on May 30, 2001 at Butte College, located off Durham-Pentz Road between Oroville and Chico. Many individuals expressed support for the proposed project, but a few expressed concerns about impacts to Butte County Meadowfoam. Several resource agencies commented that they felt the project impacts would be substantial, and an EIS/EIR was warranted. After consideration of public and agency comments, FHWA and Caltrans decided to prepare a DEIS/DEIR. A Notice of Intent and Notice of Preparation stating this decision were sent to federal and State Cooperating/ Responsible Agencies, and to other federal, State, regional and local agencies as appropriate.

The DEIS/DEIR was available for public review and comment from June 15, 2002 to July 29,2002. Another public workshop was held on July 10, 2002. Comments received during the review period are included in Appendix B.

5.2 NEPA/404 Integration Process

In 1994, Caltrans, FHWA, and various resource agencies signed a Memorandum of Understanding (MOU) that integrated the environmental approval and permitting processes for projects requiring both approval under NEPA and a USACOE Section 404 (Clean Water Act) Individual permit. Under this "concurrent process," USACOE, USFWS, USEPA, and NMFS participate in the project development process at a level dependent on the quality and quantity of the resources involved. Agencies may, at their discretion, choose not to participate until the draft document review stage.

An initial interagency coordination meeting for the proposed project was held in April of 1997 with representatives from Caltrans, USACOE, USFWS, USEPA and CDFG in attendance. Three alternatives for widening SR 149 (Widen South, Widen North and Widen to both sides – "Avoid Meadowfoam") were presented at this meeting. It was Caltrans' understanding that the agencies in attendance gave concurrence to the project purpose and need, criteria for selecting alternatives, and the range of alternatives to be studied. However, no written record of this concurrence was made.

A second interagency meeting was held in March of 1999 to present updated project information to the above mentioned resource agencies. Concerns were expressed by several of the agencies that the project purpose was not specific enough and that a wider range of alternatives needed to be investigated. Consequently, Caltrans and FHWA revised these items, presented the revisions to the resource agencies, and requested written concurrence in June of 1999. After two dispute resolution meetings (8/18/99 and 9/1/99), written concurrence for project purpose and need, criteria for selecting alternatives, and range of alternatives was received in September of 1999 from USFWS and USACOE, and in October of 1999 from USEPA (Appendix C). No response was received from NMFS.

In November of 2001, Caltrans and FHWA submitted to the USACOE a delineation of waters (including wetlands) within the project limits that are under USACOE jurisdiction. Written concurrence to this delineation was received from USACOE in February of 2002.

Agencies involved in the NEPA/404 process reviewed the draft EIS/EIR during the public circulation period. In August 2002 Caltrans, FHWA, USEPA and USACOE identified Alternative 3 as the preferred alternative/Least Environmentally Damaging Practicable Alternative (LEDPA). Evaluation of specific project impacts and proposed mitigation were based on this alternative. In November 2002 USFWS issued a non-jeopardy Biological Opinion for impacts to threatened and endangered species, and NMFS provided concurrence with the conclusion that the project would not be likely to adversely affect Essential Fish Habitat for Chinook salmon. A Habitat Mitigation and Monitoring Proposal was sent to USEPA, USFWS and USACOE for review, and these agencies provided concurrence to the plan (Appendix C). A Section 404 individual permit from USACOE and a Section 401 certification/waiver from the RWQCB would be obtained prior to project construction.

5.3 Tribal Coordination

Request for information letters were sent to the following local historical society/historic preservation groups on the dates shown:

- Butte County Historical Society (12/2/92; 9/21/99)
- Paradise Fact and Folklore (9/21/99)
- Cherokee Museum Association (9/21/00)

Request for information letters were sent to the following Native American groups:

- Native American Heritage Commission (12/2/92; 9/21/99)
- Berry Creek Rancheria (12/2/92; 9/21/99)
- Butte Tribal Council (12/2/92; 9/21/99)
- Chico Band of Mechoopda Indians (9/21/99)
- Ms. Beryl Cross (12/2/92; 10/1/99)
- Enterprise Rancheria of Maidu Indians (9/21/99)
- Maidu Nation (9/21/99)
- Mr. Joe Marine (10/1/99)
- Mr. Marvin Marine (10/1/99)
- Mooretown Rancheria of Maidu Indians (12/2/92; 9/21/99)

The Native American Heritage Commission provided the only response to the request for information letters, in both 1992 and 1999. They responded with updated lists of most likely descendents for the area. Further information is contained in the Historic Property Survey Report, available at Caltrans District 3, 703 B Street, Marysville, CA.

Chapter 6 California Environmental Quality Act Evaluation

Information in this chapter is presented to clarify the requirements of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The proposed project could have an adverse impact on the environment, and must satisfy requirements of both laws, since both Caltrans and the FHWA must make project decisions. A combined FEIS/FEIR has been prepared in accordance with NEPA and CEQA.

CEQA requires a determination of significant impacts be stated in the environmental document (EIR), and this information is presented in this chapter. Under Section 15382 of the CEQA Guidelines, "significant effect" is defined as "… a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." Caltrans, as the lead agency under CEQA, would prepare a Statement of Overriding Considerations for any significant impacts that would not be avoided or substantially lessened with mitigation. This would become part of the record of project approval.

NEPA does not require a determination of significant effects in an EIS. FHWA uses the term significant to describe Section 4(f) resources (Department of Transportation Act), Section 106 properties (National Historic Preservation Act), and floodplain impacts (Executive Order 11988).

6.1 Significant Impacts

6.1.1 Special Status Species

CEQA Significance: Will the project have a substantial adverse effect, directly or through habitat modifications, on special status species?

The following federally listed endangered or threatened species associated with vernal pools and swales would be directly, indirectly or cumulatively impacted by the proposed project: Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp and Butte

County Meadowfoam. All build alternatives could impact these species, though to a different degree (see Tables 3-9 and 3-10). Mitigation is proposed for direct and indirect impacts to vernal pool shrimp habitat. Alternative 3 (Avoid BCM) would avoid direct impacts to BCM, and mitigation is proposed for indirect impacts. However, impacts to these species could be considered cumulatively significant, meaning that the incremental effects of the project could be considerable when viewed in connection with the effects of past, current and probable future projects (see Chapter 4).

6.1.2 Wetlands

CEQA Significance: Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act?

All project alternatives would impact wetlands (Figure 3-3). Mitigation is proposed to ensure no net loss of wetland acreage (Appendix G); however, even with mitigation in place, the proposed project would contribute to cumulative impacts to wetlands (see Appendix F).

As discussed in Chapter 4 (Cumulative Impacts), Butte County is in the process of establishing a Habitat Conservation Plan, which would address cumulative impacts to special status species and habitat in the County. In addition, as part of the NEPA/404 coordination process for the proposed project, Caltrans is pursuing mitigation that would address impacts from this and other potential projects on SR 70 between Oroville and Sacramento. Specific details of mitigation measures are presented in Appendix G.

6.2 Impacts Mitigated to Less Than Significant

6.2.1 Biological Resources

CEQA Significance: Will the project have a substantial adverse effect, directly or through habitat modifications, on special status species?

Impacts to Swainson's hawk, Northwest pond turtles, Central Valley Chinook salmon and steelhead, and Valley Elderberry Longhorn Beetle would not be significant due to proposed mitigation and construction measures.

Oak Woodlands

CEQA Significance: Would the project have a substantial adverse effect on any sensitive natural community identified in local or regional plans, policies or regulations or by the CDFG or USFWS?

Mitigation for removal of oak specimen trees and oak woodland habitat would reduce impacts to these resources to a less than significant level. Construction measures would protect trees outside the work area.

6.2.2 Geology and Soils

CEQA Significance: Would the project alter the existing drainage pattern in a manner that would result in substantial soil erosion or the loss of topsoil?

Revegetation of the project area would reduce soil erosion impacts to a less than significant level.

6.2.3 Relocations

CEQA Significance: Would the project displace substantial numbers of existing people, houses, or businesses?

Compensation for displacement of houses and businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, would reduce impacts to a less than significant level, and would be determined during the right-of-way negotiation phase of the project.

6.2.4 Water Quality

CEQA Significance: Would the project substantially degrade water quality?

There are no sensitive water resources, water supply reservoirs or high quality streams that would be affected by this project. Prior to the start of construction activities, a Storm Water Pollution Prevention Plan (SWPPP) would be required to outline construction Best Management Practices (BMP) to be used to minimize impacts on receiving waters. These plans would present detailed control measures to be followed such as sedimentation retention plans, materials handling and storage, spill prevention and erosion controls. These and other specific pollution control measures would be included in the project design specifications to limit erosion,

sedimentation and the release of chemicals to the water bodies. Implementation of these measures would ensure that the project would not result in significant impacts to water quality.

6.2.5 Other Impacts

CEQA Significance: Would the project have a substantial adverse effect on a scenic vista?

With the implementation of mitigation and construction measures, impacts to cultural resources, floodplains, and visual resources would not be significant.

6.3 Impacts Found Not Significant

6.3.1 Noise

Three residences at the SR 70/149 intersection would experience noise levels that exceed the NAC level of 67 dBA as a result of the proposed project. However, future noise levels for the No Build Alternative are predicted to be within 2 dBA of those for the preferred alternative. As discussed in Section 3.5.2, an increase of 2 dBA is not a perceptible difference. Noise impacts resulting from the project are not considered significant.

6.3.2 Other Impacts

The proposed project would have no significant impacts to farmland, hazardous waste sites, cultural resources, floodplains, land use or public services, and would actually have a beneficial impact to air quality and traffic due to decreased congestion. Direct growth impacts are not expected from the proposed project; the SR 149 improvements are designed for controlled access, and there are no planned developments within the project area that are linked to the proposed highway improvements.

Chapter 7 List of Preparers and Technical Reports

This Final Environmental Impact Statement/Environmental Impact Report (FEIS/FEIR) was prepared by the North Region of the California Department of Transportation (Caltrans). The following Caltrans staff contributed to this document:

7.1 Caltrans Contributors

Andrus, Mitch, Transportation Engineer, Range D. B.S.Civil Engineering, University of Southwestern Louisiana; 13 years at Caltrans, 10 years experience as project engineer. ***Contribution: Project Engineer.***

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Gillies, Jennifer, Associate Environmental Planner (Natural Science). B.S. Biology (botany emphasis), California State University, San Francisco; 10 years experience in biological studies and environmental planning. ***Contribution: Biological surveys; Alternatives Analysis & Wetland Delineation updates.***

Haury, Melissa, Transportation Engineer. B.S. Civil Engineering, B.A. Visual Communication, California State University, Chico; ***Contribution: Biological Impact Calculations, Environmental Resource Mapping.***

Hibbert, James S. III, Landscape Associate. B.A. Geography, University of Alaska, Fairbanks; B.L.A. University of Oregon; 2 years of experience in Landscape Architecture. ***Contribution: Visual Impact Assessment Technical Report.***

Jones, Douglas, Senior Transportation Engineer. B.S. Civil Engineering, California State University, Chico; 18 years of experience in civil engineering. ***Contribution: Senior Design Engineer.***

Nelson, Krishnan, Associate Environmental Planner (Natural Science). B.S. Biological Sciences, California State University, Chico; 6 years of experience as fisheries biologist. ***Contribution: Revised NES (2002), Wetland Delineation update, Habitat Mitigation and Monitoring Proposal.***

Noble, Daryl, Associate Environmental Planner (Archaeology), B.S. Anthropology, California State University, Sacramento, M.A. Anthropology, California State University, Sacramento, 25 years experience in California Archaeology. ***Contribution: Archaeological surveys, HPSR review, Addendum to Finding of Effect.***

Offermann, Janis, Associate Environmental Planner (Archaeology). M.A. Anthropology, University of California, Davis; 24 years of experience in California archaeology. ***Contribution: Archaeological surveys and Historic Property Survey Report.***

Phillips, Lesley, Landscape Associate. B.S. Landscape Architecture, University of California, Davis; 7 years experience Caltrans Bridge Structure Architecture, 4.5 years experience Landscape Architecture. ***Contribution: Visual Impact Assessment review***

Pommerenck, Keith, Civil Engineer. B.S. Environmental Resources, California State University, Sacramento; 16 years of experience preparing air, noise and energy studies. ***Contribution: Air and Noise Reports.***

Sannar, Dick, Associate Transportation Engineer (retired). Certificate in Hazardous Materials Management, California State University, Davis; 8 years of experience in hazardous waste studies, 22 years experience in water quality studies. ***Contribution: Hazardous Waste, Water Quality and Floodplain Risk Technical Report***.

Sauer, Scott, Transportation Planner. B.A. Government and Environmental Studies, California State University, Sacramento; 2 years of experience in transportation planning. ***Contribution: Growth Inducement Technical Report.***

Vaughan, Denise, Graphics and Website Design. B.A. Communications, California State University, Chico; 8 years experience in Graphic Design. ***Contribution: Document Graphics and Webpage design***

Wang, Litton, Transportation Engineer. M.S. Engineering Mechanics, University of Missouri, Rolla, B.S. Mine Construction, Bejiing Institute of Mining & Technology; 2 years engineering experience at Caltrans. ***Contribution: Environmental Resource Mapping.***

7.2 Technical Reports

The following technical reports were prepared by Caltrans staff during development of the proposed project:

Air Quality Report

Alternatives Analysis

Floodplain Analysis

Growth Inducement Report

Habitat Mitigation and Monitoring Plan

Hazardous Waste Evaluation

Historic Property Survey Report

Noise Report

Natural Environment Study (Revised)

Project Study Report

Project Report

Visual Impact Assessment

Water Quality Report

Wetland Delineation

Chapter 8 Distribution List

In compliance with NEPA and CEQA, the public and agencies were notified of the availability of the Draft EIS/EIR. The Draft EIS/EIR availability was published in the Federal Register and in local newspapers. The notifications of were sent to all parties on the project mailing list.

The Draft EIS/EIR was distributed to key interested parties and key elected and appointed officials, as well as to all parties requesting it. The Draft EIS/EIR was available at the Chico Library, the Oroville Library, and through the Caltrans District 3 Public Information Office.

The following is a list of people and agencies receiving the Draft EIS/EIR:

Federal Agencies

U.S. Environmental Protection Agency
Region 9, EIS Coordinator
75 Hawthorne Street
San Francisco, CA 94105

National Marine Fisheries Services
Central Valley Office
650 Capitol Mall, Room 8-300
Sacramento, CA 95814

U.S. Army Corps of Engineers
Regulatory Branch
Sacramento District
1325 J Street
Sacramento, CA 95814

USDA – National Resources
Conservation Service
430 G Street, #4164
Davis, CA 95616-4164

U.S. Fish & Wildlife Service
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

Mr. Steve Tuggle
U.S. Dept. of Energy, Western Area
Power Administration
Sierra Nevada Region
114 Parkshore Drive
Folsom, CA 95630

State Agencies

Office of Planning and Research
(State Clearinghouse)
P.O. Box 3044
Sacramento, CA 95812-3044

Ms. Kathleen Farren
Trust for Public Land
1107 9th Street, Suite 1050
Sacramento, CA 95814

Department of Conservation
801 K Street, MS 24-01
Sacramento, CA 95814

Calif. Dept. of Fish & Game
Fisheries, Wildlife & Environmental
Programs
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Calif. Dept. of Fish & Game
Habitat Conservation Planning Branch
1416 9th Street, Suite 1341
Sacramento, CA 95814

Office of Historic Preservation
P.O. Box 942896
Sacramento, CA 94296-0001

Dept. of Parks and Recreation
Resource Management Division
P.O. Box 942896
Sacramento, CA 94296-0001

DWR – Reclamation Board
1416 Ninth Street, Room 1601
Sacramento, CA 95814

Calif. Dept. of Water Resources
Environmental Services Office
3251 S Street, Room 111
Sacramento, CA 95816-7017

California Highway Patrol
Office of Special Projects
2555 1st Avenue
Sacramento, CA 95818

Calif. Dept. of Housing and
Community Development
Housing Policy Division
P.O. Box 952053
Sacramento, CA 94252-2053

Calif. Dept. of General Services
Environmental Services Section
1325 J Street, Suite 1910
Sacramento, CA 95814-2928

Calif. Air Resources Board
Transportation Projects
P.O. Box 2815
Sacramento, CA 95812

Integrated Waste Management Board
P.O. Box 4025
Sacramento, CA 95812-4025

State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812

Department of Toxic Substances
Control
1000 I Street
Sacramento, CA 95812-2828

California Energy Commission
1516 Ninth Street, MS-29
Sacramento, CA 95814-5504

Native American Heritage
Commission
915 Capitol Mall, Room 364
Sacramento, CA 95814

Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825-8202

Regional

Executive Officer
Regional Water Quality Control
Board, Central Valley Region
415 Knollcrest Drive
Redding, CA 96002

Executive Director
SACOG
3000 S Street, Suite 300
Sacramento, CA 95816

Mr. Don Chambers
c/o P.G.&E.
460 Rio Lindo
Chico, CA 95926

Mr. Oscar Sample
c/o P.G. & E.
350 Salem Street
Chico, CA 95926

Federal Elected Officials

Honorable Barbara Boxer
United States Senator
1700 Montgomery Street, #240
San Francisco, CA 94111-1023

Honorable Dianne Feinstein
United States Senator
1700 Montgomery St, Ste 305
San Francisco, CA 94111-1024

Honorable Wally Herger
Representative in Congress, 2nd District
55 Independence Circle, Ste 104
Chico, CA 95973

State Elected Officials

Honorable Maurice Johannessen
Member of the Senate
State Capitol, Rm 5061
Sacramento, CA 95814

Honorable Tim Leslie
Member of the Senate
State Capitol, Rm 4081
Sacramento, CA 95814

Honorable Sam Aanestod
Member of the Assembly
State Capitol
Sacramento, CA 95814

Honorable Richard Pickerson
Member of the Assembly
State Capitol
Sacramento, CA 96814

Honorable Thomas Oller
Member of the Assembly
State Capitol, Rm 416
Sacramento, CA 95814

Local Elected Officials

R.J. Beeler
Supervisor, District 1
25 County Center Drive
Oroville, CA 95965

Jane Dolan
Supervisor, District 2
25 County Center Drive
Oroville, CA 95965

Mary Anne Houx
Supervisor, District 3
25 County Center Drive
Oroville, CA 95965

Curt Josiassen
Supervisor, District 4
25 County Center Drive
Oroville, CA 95965

Kim Yamaguchi
Supervisor, District 5
25 County Center Drive
Oroville, CA 95965

Local Government

Butte County Planning Director
7 County Center Drive
Oroville, CA 95965

Butte County Air Quality Management District
2525 Dominic Drive, Suite J
Chico, CA 95928

Butte County Association of Governments
965 Fir Street
Chico, CA 95928-6301

Butte County Public Works Director
25 County Center Drive
Oroville, CA 95965

County Fire Chief
Butte County Fire Rescue
176 Nelson Avenue
Oroville, CA 95969

City of Oroville
Planning Department
1735 Montgomery Street
Oroville, CA 95965

City of Chico
Community Development Dept.
P.O. Box 3420
Chico, CA 95927

Special Interest

California Native Plant Society
Butte County Chapter
1144 Mount Ida Road
Oroville, CA 95966

Ms. Barbara Vlamis
Butte Environmental Council
116 West 2nd Street, Suite 3
Chico, CA 95928

California Wildlife Federation
1012 J Street, Suite 201
Sacramento, CA 95814

General Interest

Aliberti Construction, Inc.
820 Swift Street,
Santa Cruz, CA 95060
ATTN: Joe Aliberti

Mr. Clayton Gunn
4741 Lucky 7 Lane
Oroville, CA 95965

Epic Homes
1263 Esplanade
Chico, CA 95926
ATTN: Pete Giampaoli

California State University, Chico
400 W First Street
Chico, CA 95929
ATTN: Bill Jones – Library

Business Manager
Operating Engineers Local #3
474 Valencia Street
San Francisco, CA 94103

Christensen & Schwarz, LLP
1 Governors Lane
Chico, CA 95926

Jack Miller
601 Locust St.
Redding, CA 96001

This FEIS/R will be sent to all persons, organizations, and agencies that submitted substantive comments on the DEIS/R, to all individuals who have requested a copy, and to all cooperating/responsible agencies.

This FEIS/R will also be available for information and public disclosure purposes at the following locations:

Chico Library
1108 Sherman Ave.
Chico, CA 95926

Oroville Library
1820 Mitchell Ave.
Oroville, CA 95965

Butte County Association of Governments
965 Fir Street
Chico, CA 95965

Caltrans District 3
703 B Street
Marysville, CA 95901

Chapter 9 References

Summary

- Caltrans 2000. California Department of Transportation, Alternatives Analysis.
- CDFG 1994. California Department of Fish & Game. Staff Report on Swainson's hawk
- 40 CFR 1508.7. Code of Federal Regulations, Cumulative Impacts.
- Caltrans 2000. California Department of Transportation, State Route 70 Sacramento to Chico Corridor Growth Inducement Report.
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- PSI 2002. "Sampling Report for Dry Creek Bridge." Prepared for Caltrans by Professional Service Industries, Inc., Oakland, CA.
- Caltrans 1998. California Department of Transportation. Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects.
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- ACOE 1987. **Field Guide for Wetland Delineation:** 1987 Corps of Engineers Manual. Poolsville, Md. WTI 95-3.
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- 40 CFR 1508.7. Code of Federal Regulations, Cumulative Impacts.
- CEQA Guidelines, Rev 1997. Section 15130(a), Cumulative Impacts.
- Caltrans 2000. California Department of Transportation. Biological Assessment, Route 70 Freeway Upgrade, Sutter and Yuba Counties.
- Whitmore 2000. California Department of Fish & Game. Personal communication with Caltrans.

Chapter 10 Index and Glossary

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Glossary

Accident rate – Number of accidents per million vehicles.
ACOE – U.S. Army Corps of Engineers
Aggregate Base – A layer of rock material immediately below the pavement.
Anadromous - Migrating up rivers from the sea to breed in fresh water.
Best Management Practices (BMP) – Any program, technology, process, operating method, measure or device that controls, prevents, removes or reduces pollution.
Basin Plan – A specific plan for control of water quality within one of the nine hydrologic basins of the State under the regulation of a Water Quality Control Board.
Bypass – An arterial highway that permits traffic to avoid all or part of a certain area such as an urban area or park.
Caltrans – California Department of Transportation
CDFG – California Department of Fish and Game
CEQA – California Environmental Quality Act of 1970
CNDDB – California Natural Diversity Data Base; a database of plant and animal species
CNPS – California Native Plant Society
Conventional Highway – A highway with no control of access roads onto the highway, which may or may not be divided or have grade separations at interchanges.
Cooperating Agency – An agency, other than the lead agency, that has jurisdiction by law or other expertise, that is involved in a proposed project.
Corridor – A strip of land between two termini within which traffic, topography, environment, and other characteristics are evaluated for transportation purposes.
CTC – California Transportation Commission
Cumulative Effects – Project effects that are related to other actions with individually insignificant but cumulatively significant impacts.
dBA – Decibels on the A-weighted scale.
DBH – Diameter (of a tree) measured at breast height.
Decibel – A numerical expression of the relative loudness of a sound.
Dense Grade Asphalt Concrete (DGAC) – Densely compacted asphalt concrete pavement
Draft EIS/EIR – Draft Environmental Impact Statement (federal), Environmental Impact Report (State).
Drainage basin – The area in which all surface water will accumulate into one given stream.
Encroachment (floodplain) – An action within the limits of the 100-year floodplain.

Endangered – Plant or animal species that are in danger of extinction throughout all or a significant portion of its range.
Erosion – The wearing away of the land surface by running water, wind, ice, or other geological agents.
ESU – Evolutionarily Significant Unit – A distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.

Expressway – Arterial highway with at least partial control of access, where limits are placed on number and type of intersecting streets, roads and driveways. An expressway may or may not be divided or have separations at intersections.
FEMA – Federal Emergency Management Agency
FHWA – Federal Highway Administration
Federal Register – A federal publication that provides official notice of federal administrative hearings and issuance of proposed and final federal administrative rules and regulations.
Finished Grade – Finished surface elevation of a roadway
FIRM – Flood Insurance Rate Map. The official map upon which FEMA has delineated the areas of special flood hazard applicable to a community.
Floodplain (100-year) – The area subject to flooding by the flood or tide having a one-percent chance of being exceeded in any given year.
Freeway – A divided arterial highway with full control of access and with grade separations at intersections.
Grade Separation – Utilized when two roads intersect at different grades (vertical elevations). Normally provided as part of an interchange, in lieu of an at-grade intersection.
Habitat – The place or type of site where a plant or animal naturally or normally lives and grows.
Hectare – A unit of surface measure in the metric system, equal to 10,000 square meters.
Hinge Point – Point of the graded roadway shoulder at which the slope tapers off, typically 3 ft beyond the edge of the paved shoulder
HPSR – Historic Property Survey Report. A comprehensive evaluation of cultural resources in a given area.
Initial Site Assessment – A Caltrans term for an initial study to determine hazardous waste issues on a project.
LEDPA – Least Environmentally Damaging Practicable Alternative. The Clean Water Act Section 404(b)(1) Alternatives Analysis is a specific evaluation to determine the LEDPA to waters of the U.S. (including wetlands) while meeting the project purpose. A Section 404 Permit can only be issued for the LEDPA.
L_{eq} – A measurement for evaluation of sound impacts, it is the measurement of the fluctuating sound level received by a receptor averaged over a time interval (usually one hour).
Level of Service (LOS) – A measurement of capacity of a roadway.
M - (meters)
Median – The area of a divided highway that separates the traveled way for traffic in opposite directions.
Mitigation – Compensation for an impact by replacement or providing substitute resources or environments. Mitigation can include avoiding an impact by not taking a certain action, minimizing impacts by limiting the degree of an action, or rectifying an impact by repairing or restoring the affected environment.
NEPA – National Environmental Policy Act of 1969

NEPA/404 Integration Process- Integration of NEPA and Section 404 of the Clean Water Act, for projects that require a NEPA action and an Individual Permit under Section 404.
NES – Natural Environment Study (biology)
NMFS – National Marine Fisheries Service
NOD – Notice of Determination. A decision statement that indicates that a project has been approved subject to the requirements of CEQA.
NOI – Notice of Intent, part of the NEPA process. A notice placed in the Federal Register to advise the public that an environmental impact statement will be prepared for a project.
NOP – Notice of Preparation, part of the CEQA process. Notice sent to responsible agencies stating that an environmental impact report will be prepared for a project.
NPDES – National Pollutant Discharge Elimination System. A permit regulated by the Regional Water Quality Control Board that is required if more than 2 ha (5 ac) of original ground is graded. One condition of this permit is that the contractor submit a Storm Water Pollution Prevention Plan (SWPPP), which is similar tot he Water Pollution Control Plan required by Caltrans' Standard Specification 7-1.01G.
Open Grade Asphalt Concrete – Pervious layer of asphalt concrete pavement, placed over the layer of dense grade asphalt concrete
Postmile (PM) – A method of identifying a location on the State Highway System using miles. When combined with the county and route, identifies unique locations along any State route in terms of miles.
Practicable – An action that is capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.
Profile Grade – Finished surface elevation of a roadway, typically from a view down the centerline
Receptors – Term used in air quality and noise studies that refers to houses or businesses that could be affected by a project.
Regulatory Agency – An agency that has jurisdiction by law.
Responsible Agency – A public agency other than the Lead Agency that has responsibility for carrying out or approving a project under CEQA.
Right-of-Way – A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to transportation purposes.
Riparian – Pertaining to the banks and other adjacent terrestrial (as opposed to aquatic) environs of freshwater bodies, watercourses, estuaries, and surface-emergent aquifers, whose transported freshwater provides soil moisture sufficient in excess of that available through local precipitation to potentially support the growth of vegetation.
ROD – Record of Decision, part of the NEPA process. A statement that explains why an alternative has been selected, and summarizes mitigation and efforts made to minimize environmental impacts.
RTP – Regional Transportation Plan.
RWQCB – Regional Water Quality Control Board.
SHPO – State Historic Preservation Officer.
Special Status Species – Plant or animal species that are either (1) federally listed, proposed for or a candidate for listing as threatened or endangered; (2) bird species

protected under the federal Migratory Bird Treaty Act; (3) protected under State endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies; (4) recognized by national, state, or local environmental organizations (e.g., California Native Plant Society).

STIP – State Transportation Improvement Program.

SWPPP – Storm Water Pollution Prevention Plan.

Threatened – species that is likely to become endangered in the foreseeable future in the absence of special protection.

TIP – Transportation Improvement Program.

TSM – Transportation Systems Management.

Underground Storage Tanks (USTs) – Tanks that typically contain motor vehicle fuel and are placed approximately three feet below the ground surface.

USACOE – U.S. Army Corps of Engineers.

USEPA – U.S. Environmental Protection Agency.

USFWS – United States Fish and Wildlife Service.

Waters of the United States – As defined by the USACOE in 33 CFR 328.3(a):

1. All waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce, including any such waters:
   (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundment of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs 1-4;
6. The territorial seas;
7. Wetlands adjacent to waters (waters that are not wetlands themselves) identified in paragraphs 1-6.

Wetlands – Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas [33 CFR 328.3(b)].